

Dogwood

The flowering dogwood (*Cornus florida*) is the species most people think of when the word dogwood is mentioned. Although it is considered one of the favorite trees in the south, there are two other species, kousa dogwood (*Cornus kousa*) and Cornelian cherry dogwood (*Cornus mas*), that will grow in all areas of South Carolina except along the coast from Charleston to Savannah, Ga. The flowering dogwood is adapted to all areas of the state.



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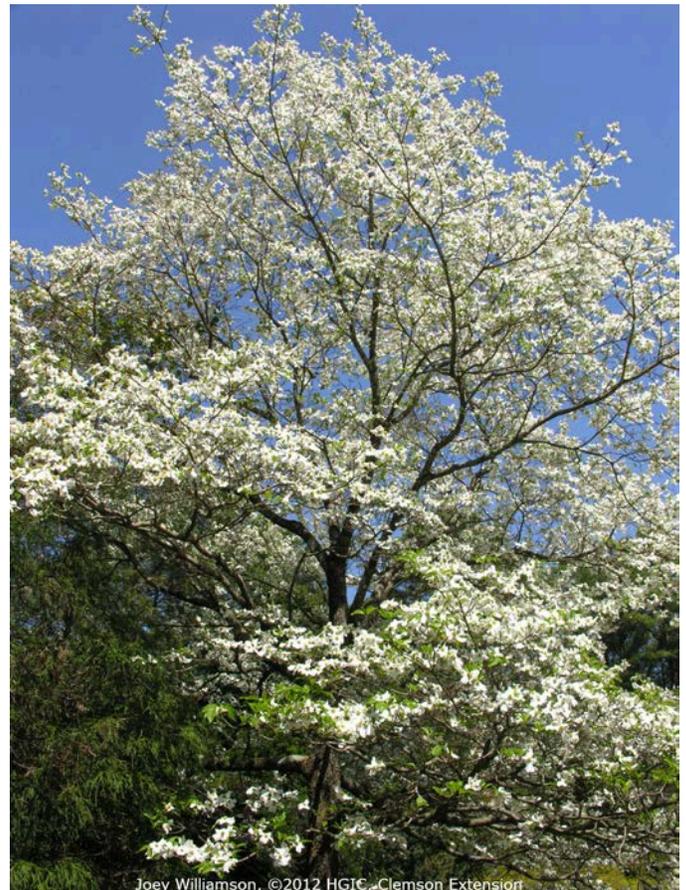
Cornus florida (Flowering Dogwood) flower.
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General Information on Dogwoods

Mature Height/Spread: The height and spread varies depending on the species and its location in the landscape. The height ranges from 15 to 20 feet tall (flowering dogwood in the sun) to 40 feet tall (flowering dogwood in the shade). The spread may be even greater than the height.

Growth Rate: Dogwoods grow at a slow to moderate rate (about 20 feet in 25 years).

Ornamental Features: Each species brings its own value to the landscape. The "flowers" of the flowering dogwood and kousa dogwood are not actually flowers, but bracts, which are modified leaves that look like petals. The true flowers are clustered in the center of these bracts. The "flowers" may be white, pink or yellow. They may bloom in late winter/early spring before leaves appear (flowering dogwood and Cornelian cherry), or later in spring after leaves emerge (kousa). Fruit may be scarlet red (flowering dogwood and Cornelian cherry) or pinkish red (kousa).



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Cornus florida (Flowering Dogwood) in bloom.
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One of the most appealing features of many dogwoods is the graceful beauty of their tiered, horizontal branching. This is especially true of flowering and kousa dogwoods sited in shade. Cornelian cherry tends to be multi-stemmed and is formed more like a shrub than a tree.

Problems: The flowering dogwood is susceptible to many diseases and insect pests. Some kousa dogwoods are more resistant to these pests than flowering dogwood. Cornelian cherry is generally pest-free. For more information on disease and insect problems on dogwoods, refer to [HGIC 2003, *Dogwood Diseases & Insect Pests*](#).

Landscape Use: Each of these species is recommended for use in screens, as a border accent, near a deck or patio, or as a specimen.

Dogwoods prefer moist, well-drained, acidic (5.5 to 6.0 pH) soil that is high in organic matter. While all dogwoods do well in full sun or partial shade, the flowering dogwood prefers partial shade. Good air circulation is necessary to hasten drying of leaves after rainfall and lower the risk of disease.

Dogwoods do not tolerate extremely wet or dry soils, and should be watered deeply (1 to 2 inches per week) during dry periods, especially if located in the sun. Watering should always be done in the morning to reduce risk of disease. Heavily mulch a large area around the tree to help retain moisture and prevent mechanical damage from lawn mowers and trimmers. A mature tree should have a 2- to 3-inch deep ring of mulch at least 8 to 10 feet in diameter around the tree. Do not place the mulch directly against the trunk. Fertilize in late spring (after new leaves emerge) up to early fall. Avoid fertilizing trees stressed by drought during the summer months.

To reduce the chances of disease, purchase trees from a disease-free nursery. Determine where the tree was grown and buy it only if it was grown in the area where it will be planted. If it is not adapted to your particular climate it may not be as hardy or bloom as well. Do not dig up plants from the wild as these plants may carry disease. Nursery-grown trees will also recover from planting more quickly than those dug up in the woods.

Flowering Dogwood (*C. florida*)

Mature Height/Spread: The flowering dogwood will grow 40 feet tall when grown as an understory tree in a woodland setting. In the sun, the same tree may only grow 15 to 20 feet tall and wide. Spread can be greater than height at maturity. It can be grown as a single or multi-trunk tree.

Growth Rate: A slow to moderate grower, this tree can grow 15 feet in 18 years; it may grow more quickly in shade.

Ornamental Features: The showy white, pink or red "flowers" bloom in spring (April and May) before the leaves emerge. Trees grown from seed vary in the age at which they begin flowering. Fast-growers usually begin their blooming cycle later than slow growers.

The fruit of the flowering dogwood turn bright red in September and October. They grow in clusters, and if not discovered by birds and other wildlife, can persist on the tree until December. The fall leaf color is red to reddish-purple, although those sited in full shade may have poor fall color.



Flowering dogwood fall color
Joey Williamson, ©HGIC, Clemson Extension

Flowering dogwoods sited in shade are tall and thin, with graceful, open, horizontal branching. Those growing in the sun tend to be shorter, denser and more compact. They also produce more flowers than those in the shade.

Problems: The flowering dogwood is susceptible to many diseases and pests. The dogwood borer will attack newly planted specimens, trees in poor health

and those damaged by lawn mowers or weed trimmers. To reduce mechanical impact (thus insect and disease incidence), provide mulch beneath the canopy of dogwoods. Other problem insects include borers, midges (which cause club-shaped galls or swellings on twigs), scale and leaf miner. Crown canker, spot anthracnose, powdery mildew and leaf-spotting fungi will also attack flowering dogwood.

A relatively new, deadly fungal disease called dogwood anthracnose (*Discula destructiva*) has weakened and/or killed many dogwoods in New England and the Middle Atlantic. Dogwood anthracnose is most severe only in areas of the state that are higher than 2000 feet. A few cases have been reported at lower elevations where dogwoods are grown in very cool, moist, shady locations. The fungus likely cannot survive the heat of the Piedmont area and further south, and therefore, will probably not cause problems with dogwoods in most of the state.

Landscape Use: The flowering dogwood is recommended for use as a specimen, near a deck or patio, as a border accent or in screens. It is a good small shade tree, and works well naturalized in open woodland areas, especially at the edges of woods, where it will receive some sun.

When selecting a dogwood for use in the landscape, it is important to consider the potential problem of dogwood anthracnose in the Upper Piedmont region of South Carolina. Since shaded trees at higher elevations are most susceptible to the disease, consider using kousa dogwood or Cornelian cherry in place of flowering dogwood in shaded areas of the Upstate.

The ideal soil for flowering dogwood is moist, fertile, sandy or loamy and slightly acidic. It must be well-drained. Although it prefers partial shade, especially in the afternoon, it will tolerate full sun. Place in a site where there is good air circulation. Provide deep irrigation during dry periods, especially for those located in the sun. This is essential during the first few years of establishment. When planting, locate in an existing landscape bed, or provide mulch to prevent mechanical damage and help soil retain moisture.

Although routinely grown with multiple trunks, it can be trained to a short, single trunk. Prune

drooping branches if located near a patio or walkway. Keep pruning to a minimum.

Kousa Dogwood (*C. kousa*)

Mature Height/Spread: The kousa dogwood will grow 20 to 25 feet tall and wide. In youth, it grows stiffly upright, but with age spreads more broadly with horizontal branching.

Growth Rate: A slow to moderate grower, it will grow about 10 feet in 15 years.

Ornamental Features: The "flowers" (bracts) of the kousa dogwood appear after leaves emerge in spring, several weeks after the flowering dogwood. Most are creamy white; some will turn pinkish with age. The showy fruit are pinkish-red to red, and appear in September and October. They resemble raspberries and are edible, although somewhat mealy. Fruit could cause some litter problems. Fall leaf color is varies from purple to red to yellow.



Kousa dogwood in bloom
Joey Williamson, ©HGIC, Clemson Extension

The branches of this species grow upright in a young tree, and droop as the tree ages. The strong horizontal branching in older trees is an especially attractive feature.

Problems: Some kousa dogwoods are more resistant than flowering dogwood to dogwood anthracnose, powdery mildew and spot anthracnose. This species is more resistant to borers than flowering dogwood.



Kousa dogwood fall color
Joey Williamson, ©HGIC, Clemson Extension

Landscape Use: Kousa dogwood is best used as a border accent, near a deck or patio, or as a specimen. It works well at the edge of woods where it will receive some sun.

Ideal soil is moist, fertile, loamy and well-drained. This tree may be more adaptable to soil conditions than flowering dogwood. It does not tolerate drought, and should be deeply irrigated during hot, dry spells. It prefers shade in the afternoon in the South, but can grow in full sun. Plant in an area large enough for good root expansion. Provide mulch under the canopy to prevent mechanical damage and preserve soil moisture.

There is a group of hybrids (*C. florida* x *C. kousa*) called the Stellar® series that was introduced recently. These hybrids incorporate some of the best qualities of each parent, and are reportedly more disease-resistant than *C. florida*.

Cornelian Cherry Dogwood (*C. mas*)

Mature Height/Spread: The Cornelian cherry will grow 20 to 25 feet tall and 15 to 20 feet wide. It is a rounded, multi-stemmed small tree or large shrub with a network of fine stems.

Growth Rate: A slow to moderate grower, it will grow 20 feet in 25 years.

Ornamental Features: The Cornelian cherry produces showy yellow flowers in late winter and early spring, before leaves emerge. Fruit become bright red in mid-summer and are attractive to birds. Falling fruit may create litter problems and can

temporarily stain walks and concrete. The fall leaf color is often poor, ranging from dull green to purplish red.

Problems: This is generally a pest-free plant. It has shown good resistance to powdery mildew and dogwood anthracnose in some tests.

Landscape Use: This plant can be used as a border accent, near a deck or patio or as a specimen. It can also be used in containers. It tends to be multi-stemmed, and may sucker from the lower trunk and roots, making it a good candidate for a hedge or shrub border. Lower branches may be removed to make a small tree.

It will grow in a variety of soil types but prefers moist, fertile, well-drained soil. It is not tolerant of extended drought. Mulch will encourage root growth and provide moisture retention. Plant in sun or partial shade.

The cultivar 'Spring Glow' may be the best selection for the South. It grows 25 feet tall and 20 feet wide and blooms in late winter. Red edible fruit appear in July.

Recommended Dogwood Cultivars

The following dogwoods are among those recommended for their tolerance or resistance to disease. (Disease tolerance means the ability of a plant to endure an infectious or noninfectious disease, adverse condition or chemical injury without serious damage or yield loss. Disease resistance means that infections are few, do not progress very far or do not occur.)

Dogwood Anthracnose (Resistant)

- *C. kousa* 'Big Apple' (white)
- *C. kousa* 'China Girl' (white)
- *C. kousa* 'Gay Head' (white)
- *C. kousa* 'Julian'(white)
- *C. kousa* 'Milky Way' (white)
- *C. kousa* 'Milky Way Select' (white)
- *C. kousa* 'Steeple' (white)
- Stellar® series - *Cornus* 'Rutdan' Celestial™ (white); *C.* 'Rutcan' Constellation® (white); *C.* 'Rutfan' Stardust® (white); *C.* 'Rutgan' Stellar Pink ® (pink)

Dogwood Anthracnose (Highly tolerant)

- Stellar® series - *C.* 'Rutban' Aurora® (white); *C.* 'Rutlan' Ruth Ellen® (white)

Spot Anthracnose (Tolerant)

- *C. florida* 'Junior Miss' (pink)
- *C. florida* 'Cherokee Brave' (reddish pink), 'Cherokee Chief' (deep red) and 'Welch 's Bay Beauty' (white) are somewhat tolerant.
- *C. kousa* 'National' (white)
- *C. kousa* 'Milky Way Select' (white)
- Stellar® series - *C.* 'Rutgan' Stellar Pink® (pink)

Powdery Mildew (Resistant)

- C. kousa* 'Milky Way' (white)
- C. kousa* 'Milky Way Select' (white)
- C. kousa* 'National' (white)
- C. kousa* 'Satomi' (deep pink)
- Stellar® series - *C.* 'Rutdan' Celestial™ (white)

Note: Chemical control of diseases and insects on large trees is usually not feasible since adequate coverage of the foliage with a pesticide cannot be achieved.

Images added by Joey Williamson, HGIC Horticulture Extension Agent, Clemson University, 06/13. Prepared by Debbie Shaughnessy, HGIC Information Specialist, and Bob Polomski, Extension Consumer Horticulturist, Clemson University. (New 02/00. Images added 11/06.)

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